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**Ergler et al.**

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(54) **IMAGING MEDICAL DEVICE**

(56) **References Cited**

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U.S. PATENT DOCUMENTS

2005/0206769 A1 9/2005 Kump et al.  
2005/0207534 A1 9/2005 Petrick et al.  
2011/0110498 A1 5/2011 Takae et al.  
(Continued)

FOREIGN PATENT DOCUMENTS

CN 102085768 A 5/2011  
DE 102005014119 A1 10/2005  
(Continued)

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OTHER PUBLICATIONS

Chinese Office Action and English translation thereof dated Dec. 28, 2016.

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(58) **Field of Classification Search**

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See application file for complete search history.

(57) **ABSTRACT**

An imaging medical device includes a detector including an active material which is serviceable in a state of thermodynamic equilibrium, a primary power supply designed to supply the imaging medical device with power in an operating state, and an ancillary power supply designed to maintain a thermodynamic equilibrium in the active material of the detector in a non-operating state of the imaging medical device to keep the detector in a state of readiness. A method for operating such an imaging medical device is disclosed, wherein in the operating state, the imaging medical device is supplied with power via the primary power supply, and wherein in the non-operating state, a thermodynamic equilibrium is maintained in the active material of the detector, with power supplied by the ancillary power supply. The detector is thereby kept in a state of readiness.

**18 Claims, 1 Drawing Sheet**

